SNELLEN VISUAL ACUITY TEST
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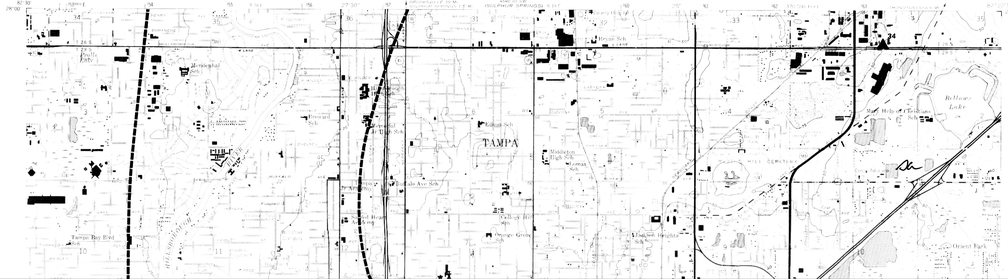
I 49.89/2:85(15) map B15

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

TAMPA QUADRANGLE
FLORIDA-HILLSBOROUGH CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)



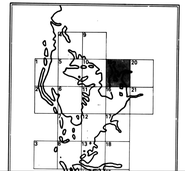
MAP B15

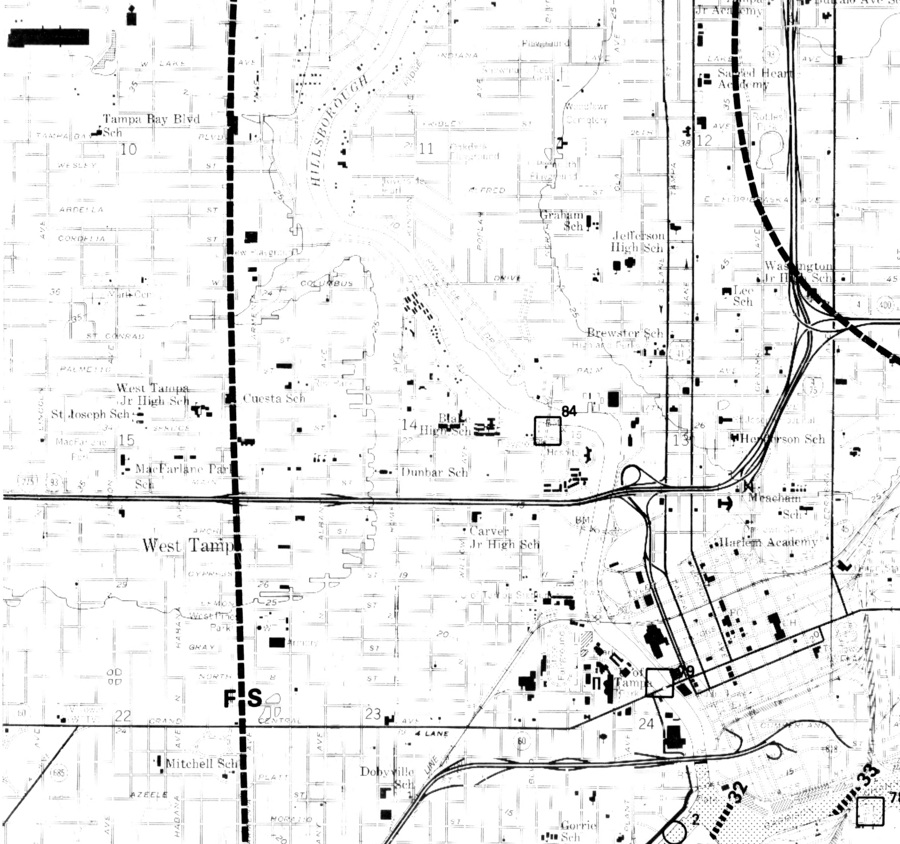
ORIGINAL

TAMPA BAY ENVIRONMENTAL ATLAS

WATER RESOURCES

TAMPA




Tampa Bay Blvd Sch
Hillsborough
Jefferson High Sch
Graham Sch
Brewster Sch
Washington Jr High Sch
Lee Sch
Sacred Heart Academy
West Tampa Jr High Sch
Cuesta Sch
St Joseph Sch
MacFarlane Park Sch
Blake High Sch
Dunbar Sch
Henderson Sch
Meacham Sch
Harlem Academy
Carver Jr High Sch
West Tampa
Mitchell Sch
Dobyville Sch
Gorrie Sch
Armory
West Pine Park
Woodlawn Cemetery
Oakdale Playground
Plymouth Playground
Rubles Park
FS
84
79
78
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22
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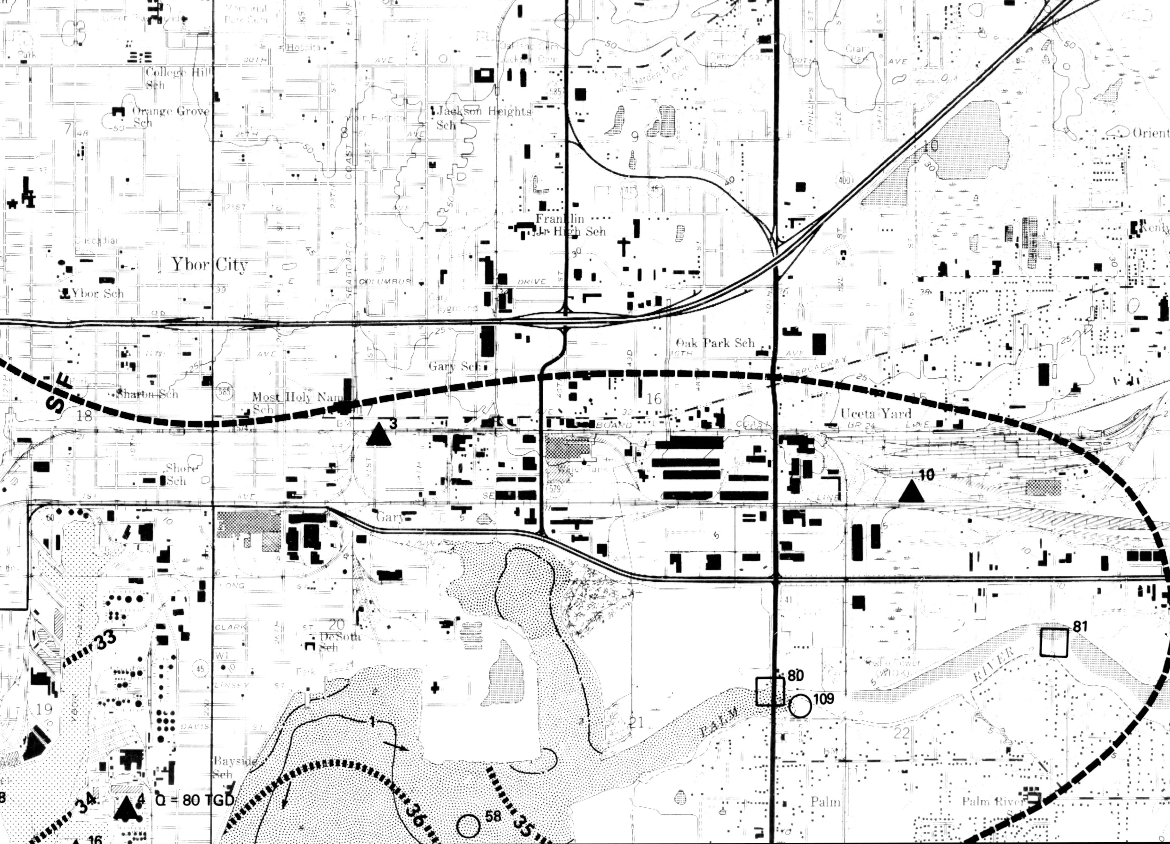
W LAKE AVE
WESLEY ST
ARDELLA ST
CORDELIA ST
ST CONRAD
PALMETTO
COLUMBUS
MAIN ST
ARCH
CYPRESS
LEMON
GRAY
NORTH
GRAND
CENTRAL AVE
PLATT
AZEELE
MORENO
HABANA AVE
ARMENIA AVE
ALBANY AVE
4 LANE
CUMBERLAND
INDIANA
ALFRED ST
DRIVE
PALM AVE
TAMPA
FLORIDA
NEBRASKA AVE
E HENDERSON


College Hill Sch
Orange Grove Sch
Jackson Heights Sch
Franklin Jr High Sch
Ybor City
Ybor Sch
Oak Park Sch
Gary Sch
Sharon Sch
Most Holy Name Sch
Shore Sch
Gary
Ucceta Yard
DeSoto Sch
Bayside Sch
Palm
Palm River
PALM RIVER
Orient
Kenly
SIF
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Q = 80 TGD
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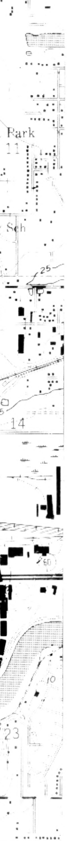
COLUMBUS DRIVE
BROADWAY
SEABOARD COAST LINE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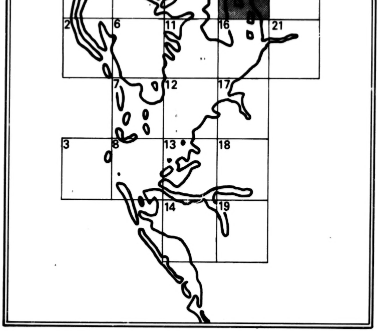
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Scale 1:24,000

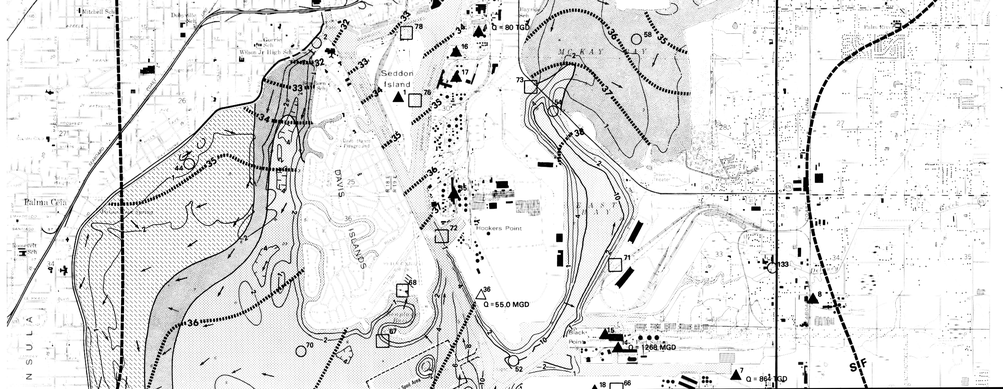
1984

TOPICAL MAPS IN THIS ATLAS:
A. BIOLOGICAL RESOURCES
B. WATER RESOURCES

Produced by U.S. Fish and Wildlife Service
Projection and 1,000 meter grid, zone 17: Universal Transverse Mercator
10,000-foot grid ticks based on Florida coordinate system, east and west zones

Overlay material compiled in 1984 from latest available data obtained from Federal, State and Local government agencies and other sources.

There is no map A19 due to a lack of data.



Federal, State and Local government agencies and other sources.

There is no map A19 due to a lack of data.

LEGEND

35 MEAN ANNUAL MID-DEPTH SPECIFIC CONDUCTIVITY (SDP/LETH-WATER QUALITY) CONTOUR MAP
Five year mean annual specific conductivity September 1978 - August 1983 (mmhos)

POINT SOURCE DISCHARGES *

▲10 Q= — Industrial Point Source Discharge. Q is permitted capacity in total gallons per day (tgd) or in millions of gallons per day (mgd).

△10 Q= — Municipal Point Source Discharge. Q is permitted capacity in total gallons per day (tgd) or millions of gallons per day (mgd).

DREDGE SPOIL DISPOSAL SITES

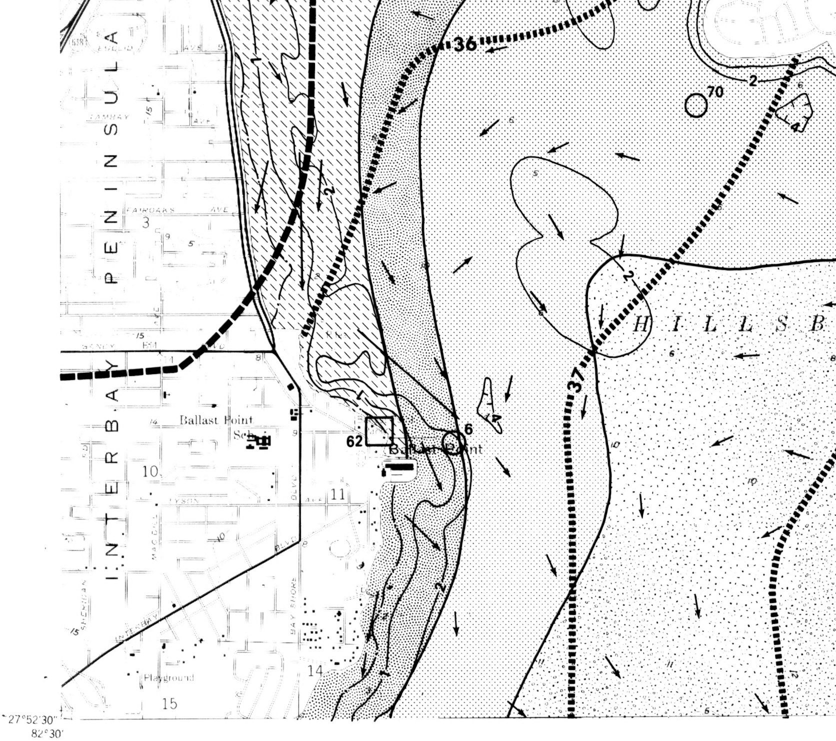
TIDE STATION *
(National Ocean Service)

⊙10 Active tide station. The tide station number is listed next to the symbol.

□10 Inactive tide station location. The tide station number is listed next to the symbol.

○10 WATER QUALITY SAMPLING STATION *
(Hillsborough County Environmental Protection Commission)
Five year seasonal means, Sept. 1978 - Aug. 1983

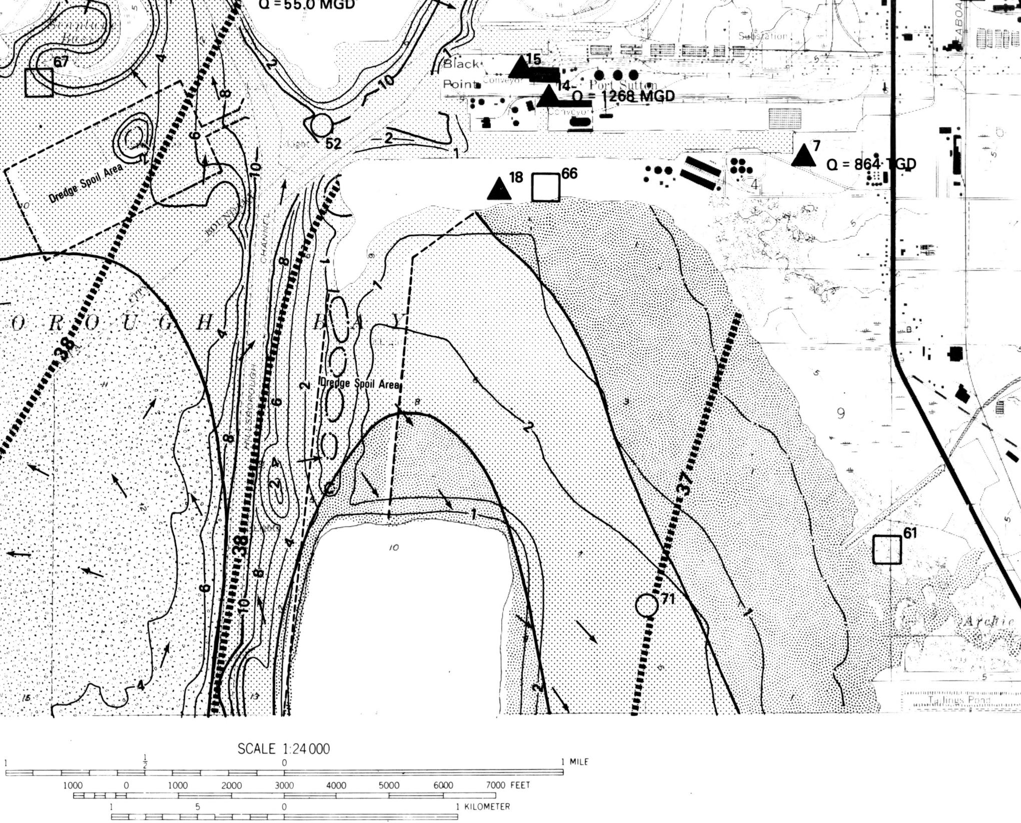
—2— BATHYMETRY


INTERBAY PENINSULA
HILLSB
Ballast Point
Ballast Point Sch
Playground
FAIROAKS AVE
TAMPAY AVE
EUCLID
TYSON AVE
MACDILL
SHERIDAN
INTERBAY
BAY SHORE BLVD
36
37
70
62
6
2
1
4
27°52'30"
82°30'

THE TAMPA BAY ENVIRONMENTAL ATLAS WAS PRODUCED BY THE U.S. FISH AND WILDLIFE SERVICE, DIVISION OF BIOLOGICAL SERVICES NATIONAL COASTAL ECOSYSTEMS TEAM (FWS/OBS) FOR COASTAL PLANNERS, DECISION MAKERS AND THE GENERAL PUBLIC, TO DETERMINE AND EVALUATE CHANGE AND TO RESOLVE CONFLICTS AMONG LAND USES, FISH AND WILDLIFE REQUIREMENTS, AND THE MAINTENANCE OF ECOLOGICAL DIVERSITY. THE STUDY AREA INCLUDES

N.O.S. TIDE STATIONS: Index of tide stations for the state of Florida. National Ocean Service, Rockville, Md. 1981.

WATER QUALITY: Total chlorophyll, conductivity, turbidity, temperature and total nitrogen data for Tampa Bay water quality stations, Sept. 1978 - August 1983, Hillsborough


Q = 55.0 MGD
Seminole Basin
67
Dredge Spoil Area
38
52
Black Point
Conveyor
15
14
Port Sutton
Q = 1268 MGD
Substation
7
Q = 864 TGD
18
66
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HILLSBOROUGH CHANNEL
BOROUGH BAY
Dredge Spoil Area
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Archie
Tailings Pond
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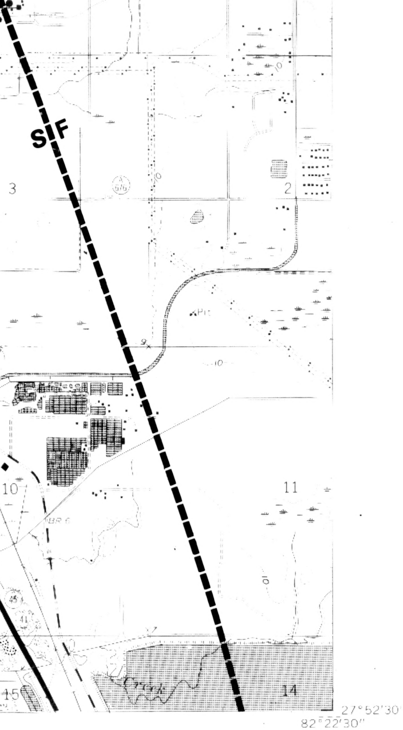
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Creek
Pit
27°52'30"
82°22'30"

☐ 10 Inactive tide station location. The tide station number is listed next to the symbol.

○10 **WATER QUALITY SAMPLING STATION ***

(Hillsborough County Environmental Protection Commission)
Five year seasonal means, Sept. 1978 - Aug. 1983

—2— **BATHYMETRY**

The contour interval is 2.0 meters with an initial 1.0 meter supplemental contour line added to better define shoals and inshore tidal flats.

-·-·-·-·- **INTERTIDAL ZONE**

This zone demarcates the area exposed and flooded by the tides and occurs between the line and the shore.

GENERALIZED SEDIMENT MAP

- ▨ Sand
- ▨ Shelly Sand
- ▨ Silty Sand
- ▨ Clayey Sand
- ▨ Sandy Clay
- ▨ Silt

NET TIDAL CURRENT

Resultant tidal current. The direction is indicated by the arrow and the discharge range is feet per second

- → 0.01 - 0.10 ft/sec
- → 0.11 - 0.20 ft/sec
- → 0.21 - 0.30 ft/sec
- → 0.31 - 0.50 ft/sec
- → > 0.50 ft/sec

F ▬▬ S **FRESHWATER/SALTWATER INTERFACE**

(U.S. Geological Survey 1979)
250 mg/l line of equal chloride concentration in the upper part of Floridan aquifer.

**Symbols appearing with numbers are described more fully in the narrative*

9		

14
Playground
15
27°52'30"
82°30'
6

THE TAMPA BAY ENVIRONMENTAL ATLAS WAS PRODUCED BY THE U.S. FISH AND WILDLIFE SERVICE, DIVISION OF BIOLOGICAL SERVICES NATIONAL COASTAL ECOSYSTEMS TEAM (FWS/OBS) FOR COASTAL PLANNERS, DECISION MAKERS AND THE GENERAL PUBLIC, TO DETERMINE AND EVALUATE CHANGE AND TO RESOLVE CONFLICTS AMONG LAND USES, FISH AND WILDLIFE REQUIREMENTS, AND THE MAINTENANCE OF ECOLOGICAL DIVERSITY. THE STUDY AREA INCLUDES A MAJOR PORTION OF THE COASTAL COUNTIES OF PINELLAS, HILLSBOROUGH, MANATEE, AND A SMALL PORTION OF SARASOTA. THERE IS NO ATTEMPT, IN THE DESIGN OR PRODUCTS OF THIS STUDY, TO DEFINE THE LIMITS OF PROPRIETARY JURISDICTION OF ANY FEDERAL, STATE, OR LOCAL GOVERNMENT TO ESTABLISH THE GEOGRAPHICAL SCOPE OF THE REGULATORY PROGRAMS OF GOVERNMENT AGENCIES.

THIS MAP HAS BEEN COMPILED FROM A VARIETY OF SOURCE MATERIALS INCLUDING MAPS, AERIAL PHOTOS, AND REPORTS. SINCE MANY SOURCES CONTAINED GENERALIZED LOCATIONS OF RESOURCES AND OTHER MAPPED FEATURES, THE USER SHOULD NOT RELY ON THESE MAPS FOR PRECISE MEASUREMENTS OF DISTANCES OR AREAS.

PRIMARY SOURCES OF MAPPED INFORMATION

SALINITY: Conductivity for Tampa Bay water quality sampling stations Sept. 1978 - August 1983. Hillsborough County Environmental Protection Commission.

POINT SOURCE DISCHARGES: Computer printout of industrial and municipal point source discharges in West Central Florida. Florida Dept. of Environmental Regulation, 1983.

DREDGE SPOIL DISPOSAL AREAS: Dredge and Spoil easement location maps. Florida Dept. of Natural Resources.

Selected areas on this U.S.G.S. base map updated using information extracted from aerial photography. This information not field checked.

N.O.S. TIDE STATIONS: Index of tide stations for the Florida. National Ocean Service, Rockville, Md. 198

WATER QUALITY: Total chlorophyll, conductivity, turb temperature and total nitrogen data for Tampa Bay quality stations, Sept. 1978 - August 1983. Hillsbor County Environmental Protection Commission.

BATHYMETRIC: Bathymetric map to St. Petersburg Q N.O.S. 1978.

INTERTIDAL ZONE: Nautical Chart #'s 11410, 11413 11425. N.O.S., Rockville, Md. 1983.

SEDIMENTS: Sediments, oceanographic observations Floristic data for Tampa Bay, Florida and adjacent v 1961-1965, Taylor and Saloman, 1969.

TIDAL CURRENTS: Changes in tidal flow, circulation caused by dredge and fill in Tampa Bay, Florida. U.S. Geological Survey Open File Report #84-447. Goodwin, 1984.

FRESHWATER-SALTWATER INTERFACE: Position o Freshwater-Saltwater interface in the upper part of Floridan aquifer, Southwest Florida, 1979. U.S.G.S. resources open-file report 82-90. Causseaux and Fretwell, 1982.

FOR COMPLETE REFERENCE SEE MAP NARRATIV

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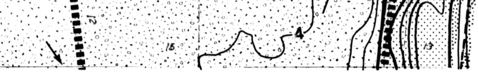
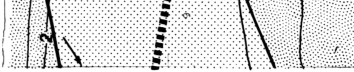
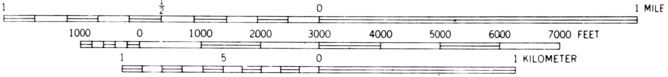




SCALE 1:24 000



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Supplemental Legend (Cont'd)

Station #54 Lat. 27°55'59" Long. 82°25'57"

PARAMETER	SPRING (3-5)	SUMMER (6-8)	FALL (9-11)	WINTER (12-2)	ANNUAL (1-12)
Total Chlorophyll (ug/l)	31.9	37.0	31.1	25.8	31.4
Conductivity (mmhos)	38133	37983	36625	41383	38531
Turbidity (NTU'S)	4.8	3.7	3.6	4.6	4.2
Temperature (°C)	22.5	30.0	26.0	17.3	24.0
Total Nitrogen (mg/l)	1.01	1.35	1.16	0.82	1.09

Station #58 Lat. 27°56'20" Long. 82°25'07"

PARAMETER	SPRING (3-5)	SUMMER (6-8)	FALL (9-11)	WINTER (12-2)	ANNUAL (1-12)
Total Chlorophyll (ug/l)	46.3	61.5	42.0	49.2	49.8
Conductivity (mmhos)	33593	35883	32933	39033	35360
Turbidity (NTU'S)	8.2	5.5	5.4	6.1	6.3
Temperature (°C)	22.8	29.9	26.0	17.5	24.0
Total Nitrogen (mg/l)	1.18	1.34	1.31	0.98	1.20

Station #70 Lat. 27°54'26" Long. 82°27'46"

PARAMETER	SPRING (3-5)	SUMMER (6-8)	FALL (9-11)	WINTER (12-2)	ANNUAL (1-12)
Total Chlorophyll (ug/l)	47.5	83.2	53.2	36.4	55.1
Conductivity (mmhos)	35900	32950	33100	39633	35396
Turbidity (NTU'S)	5.9	5.4	4.4	5.3	5.2
Temperature (°C)	22.2	28.9	25.9	17.3	23.6
Total Nitrogen (mg/l)	1.32	1.33	1.52	0.88	1.26

Station #71 Lat. 27°52'47" Long. 82°25'00"

PARAMETER	SPRING (3-5)	SUMMER (6-8)	FALL (9-11)
Total Chlorophyll (ug/l)	37.4	70.9	36.7
Conductivity (mmhos)	36733	36017	35500
Turbidity (NTU'S)	14.1	7.7	7.0
Temperature (°C)	22.6	29.8	25.9
Total Nitrogen (mg/l)	1.15	1.24	1.29

Station #109 Lat. 27°56'59" Long. 82°24'06"

PARAMETER	SPRING (3-5)	SUMMER (6-8)	FALL (9-11)
Total Chlorophyll (ug/l)	45.7	44.1	32.6
Conductivity (mmhos)	21886	23743	18973
Turbidity (NTU'S)	3.4	3.9	3.3
Temperature (°C)	23.2	28.8	24.5
Total Nitrogen (mg/l)	1.30	1.36	1.49

Station #133 Lat. 27°54'54" Long. 82°24'08"

PARAMETER	SPRING (3-5)	SUMMER (6-8)	FALL (9-11)
Total Chlorophyll (ug/l)	46.9	37.0	32.0
Conductivity (mmhos)	5971	6851	4421
Turbidity (NTU'S)	8.9	8.0	6.7
Temperature (°C)	21.9	26.8	23.6
Total Nitrogen (mg/l)	—	—	—

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Tallings Pond
27°52'30"
82°22'30"

→ 0.31 - 0.50 ft/sec

→ > 0.50 ft/sec

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FRESHWATER/SALTWATER INTERFACE

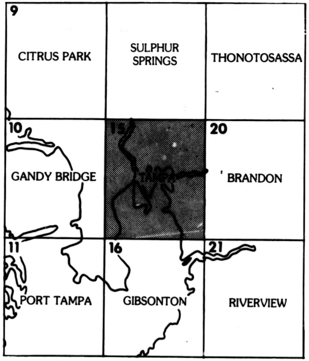
(U.S. Geological Survey 1979)
250 mg/l line of equal chloride
concentration in the upper part
of Floridan aquifer.

**Symbols appearing with numbers are described more fully in the narrative*

WINTER (12-2)	ANNUAL (1-12)
32.4	44.4
40833	37271
9.2	9.5
17.1	23.9
0.81	1.12

WINTER (12-2)	ANNUAL (1-12)
42.9	41.3
28995	23399
3.8	3.6
15.9	23.1
1.14	1.32

WINTER (12-2)	ANNUAL (1-12)
16.8	33.2
4407	5412
4.8	7.1
14.7	21.8
—	—



Note: Specific conductivity values on the supplemental legend should be in μmhos.

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Supplemental Legend for Water Quality Stations on Th

Station #2 Lat. 27°56'25" Long. 82°27'42"

PARAMETER	SPRING (3-5)	SUMMER (6-8)	FALL (9-11)	WINTER (12-2)	ANNUAL (1-12)
Total Chlorophyll (ug/l)	31.0	27.5	22.9	25.3	26.7
Conductivity (mmhos)	31267	29666	28466	37300	31675
Turbidity (NTU'S)	4.8	4.9	5.8	5.0	5.1
Temperature (°C)	22.4	29.2	25.6	17.7	23.7
Total Nitrogen (mg/l)	1.15	1.43	1.31	0.94	1.21

Station #6 Lat. 27°53'20" Long. 82°28'38"

PARAMETER	SPRING (3-5)	SUMMER (6-8)	FALL (9-11)	WINTER (12-2)	ANNUAL (1-12)
Total Chlorophyll (ug/l)	42.3	59.6	37.7	35.6	43.8
Conductivity (mmhos)	36200	35483	34033	40950	36667
Turbidity (NTU'S)	8.7	5.7	4.4	5.6	6.1
Temperature (°C)	21.9	29.1	25.6	17.1	23.4
Total Nitrogen (mg/l)	1.28	1.28	1.33	0.90	1.20

Station #44 Lat. 27°55'38" Long. 82°28'37"

PARAMETER	SPRING (3-5)	SUMMER (6-8)	FALL (9-11)	WINTER (12-2)	ANNUAL (1-12)
Total Chlorophyll (ug/l)	37.8	57.1	45.7	32.6	43.3
Conductivity (mmhos)	34567	32400	32500	39167	34658
Turbidity (NTU'S)	6.0	4.8	4.2	5.7	5.2
Temperature (°C)	21.9	28.6	25.5	17.0	23.2
Total Nitrogen (mg/l)	1.11	1.32	1.44	0.82	1.17

Station #52 Lat. 27°54'15" Long. 82°26'07"

PARAMETER	SPRING (3-5)	SUMMER (6-8)	FALL (9-11)	WINTER (12-2)	ANNUAL (1-12)
Total Chlorophyll (ug/l)	46.8	48.3	38.4	35.3	42.2
Conductivity (mmhos)	38125	38183	37067	40817	38548
Turbidity (NTU'S)	11.9	4.9	4.7	4.6	6.5
Temperature (°C)	22.8	30.0	26.5	17.8	24.3
Total Nitrogen (mg/l)	1.15	0.97	1.19	0.86	1.04

is Map

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1010a
ST CHART No. 2)

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